

8 A robot vacuum cleaner uses sensors to navigate around obstacles in a room.

(a) Tick (✓) **one** box to show which sensor would be the most suitable for this purpose.

- A

proximity

☐
- B

flow

☐
- C

pressure

☐
- D

level

☐

[1]

(b) An expert system can be used to diagnose an error with a robot vacuum cleaner.

Circle **three** components that are part of an expert system.

- knowledge base

operating system

firewall
- server

printer

actuator

inference engine
- rule base

encryption

[3]

(c) Explain how the robot vacuum cleaner can make use of machine learning.

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[3]